

What is claimed is:

1. An image forming apparatus comprising:

an endless belt for carrying an image or for conveying an image forming medium;

a driving roller for supporting the endless belt and driving the endless belt;

a driven roller for supporting the endless belt and being driven in correspondence to movement of the endless belt;

an image forming means for forming an image to the endless belt or to a medium conveyed by the endless belt;

a speed detection means for detecting moving speed of the endless belt; and

a speed control means for controlling the moving speed of the endless belt based on a detection result from the speed detection means; wherein the speed detection means generates one pulse per rotation of the driven roller being driven in correspondence to the endless belt.

2. The image forming apparatus according to claim 1, wherein the speed detection means has a notch or a perforation formed at a portion of the driven roller, and a sensor for detecting light, and wherein the sensor of the speed detection means detects passage and blockage of light from the notch or the perforation and generates a signal.

3. The image forming apparatus according to claim 2, wherein the notch or the perforation is formed on an axis of the driven roller, and the sensor is attached to an axial bearing of the driven roller or attached to an axial bearing securing member for securing the axial bearing to define a relative position between the speed detection means and the axis of the driven roller.

4. The image forming apparatus according to claim 2,
wherein the notch or the perforation is formed on an end portion of the axis
of the driven roller;
wherein the sensor has a light emitting portion and a light receiving
portion; and
wherein the light receiving portion intermittently receives a sensor light
from the light emitting portion by disposing the end portion of the axis of
the driven roller between the light emitting portion and the light receiving
portion.

5. The image forming apparatus according to claim 1,
wherein the speed control means is based on a pulse count of the driven
roller when the value of movement of the endless belt is substantially equal
to a common multiple of a peripheral length of the driven roller and a
peripheral length of the driving roller.

6. The image forming apparatus according to claim 1,
wherein the speed detection means is based on a pulse count of the driven
roller when the value of movement of the endless belt is substantially equal
to a common multiple of a peripheral length of the driven roller and a
peripheral length of the endless belt .

7. The image forming apparatus according to claim 1,
wherein the driven roller has a coefficient of linear expansion substantially
equal to a coefficient of linear expansion for a member defining an interval
of the image forming means when a plurality of the image forming means
are disposed with a predetermined interval on the endless belt,.

8. A rotary body detection device detecting the speed of a rotary
body and comprising:
a rotary body; and

a sensor for generating a signal by passage and blockage of light; wherein the rotary body has a notch or a perforation formed at a portion thereof, and the sensor generates a signal by passage and blockage of light from the notch or the perforation to detect a rotation speed of the rotary body.

9. The rotary body detection device according to claim 8, wherein the notch or the perforation is formed on an axis of the rotary body, and the sensor is attached to an axial bearing for supporting an axis of the rotary body or attached to an axial bearing securing member for securing the axial bearing to define a relative position between the speed detection means and the axis of the driven roller.

10. The rotary body detection device according to claim 8, wherein the notch or the perforation is formed on an end portion of the axis of the rotary body; wherein the sensor has a light emitting portion and a light receiving portion; and wherein the light receiving portion intermittently receives a sensor light from the light emitting portion by disposing the end portion of the axis of the rotary body between the light emitting portion and the light receiving portion.

11. An endless belt driving apparatus comprising:
an endless belt;
a driving rotary body for supporting the endless belt and driving the endless belt;
a driven rotary body being rotary driven in correspondence to movement of the endless belt;
a rotation-count detection means for detecting a rotation-count of the

driven rotary body; and

a speed control means for detecting a rotation of a prescribed first integral count of the rotary body with the rotation-count detection means and for controlling the driving roller so that the time required for the driven rotary body to rotate at the prescribed first integral count becomes substantially uniform;

wherein a moving distance of said endless belt to rotate said driven rotary body at the first prescribed integral count is substantially equal to a moving distance of said endless belt when said driving rotary body rotates at a second prescribed integral count.

12. The endless belt driving apparatus according to claim 11, wherein the driven rotary body and the driving rotary body are formed with a size so that the moving distance of the endless belt derived when the driven rotary body is rotated at the first prescribed integer count is substantially equal to the moving distance of the endless belt derived when the driven rotary body is rotated at a second prescribed integral count.

13. The endless belt driving apparatus according to claim 11, wherein the moving distance of the endless belt derived when the driven rotary body is rotated at the first prescribed integral count is set substantially equal to the moving distance of the endless belt derived when the driven rotary body is rotated at a third prescribed integral count.

14. The endless belt driving apparatus according to claim 11, wherein the driven rotary body and the driving rotary body and the endless belt are formed with a size so that the moving distance of the endless belt derived when the driven rotary body is rotated at the first prescribed integral count, the moving distance of the endless belt derived when the driven rotary body is rotated at a second prescribed integral count, and the

moving distance of the endless belt derived when the driven rotary body is rotated at a third prescribed integral count are substantially equal.

15. The endless belt driving apparatus according to claim 11, wherein the rotation count detection means generates a signal of one pulse per rotation of the driven rotary body.

16. The endless belt driving apparatus according to claim 11, wherein the rotation count detection means generates a plurality of pulse signals per rotation of the driven rotary body.

17. The endless belt driving apparatus according to claim 11, wherein the endless belt conveys a sheet and has an image forming means for forming an image to a sheet conveyed by the endless belt.

18. The endless belt driving apparatus according to claim 17, wherein the image forming means has a plurality of image carriers for carrying an image to be transferred to a sheet conveyed by the endless belt; and wherein the driven rotary body has a coefficient of linear expansion substantially equal to a coefficient of linear expansion of a supporting member for supporting the plurality of image carriers.